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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,225	11/21/2003	William Doug Cutrell	16442SSUS02U	3961
34645	7590	07/24/2007		
JOHN C. GORECKI, ESQ. P.O BOX 553 CARLISLE, MA 01741			EXAMINER TRUONG, CAMQUY	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/719,225	Applicant(s) CUTRELL ET AL.	
	Examiner Camquy Truong	Art Unit 2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/27/05, 12/26/06</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. Claims 1-23 are presented for examination.
2. It is noted that although the present application does contain line numbers in the specification and claims, the line numbers in the claims do not correspond to the preferred format. The preferred format is to number each line of every claim, with each claim beginning with line 1. For ease of reference by both the examiner and Applicant all future correspondence should include the recommended line numbering.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-23 are rejected under 35 U.S.C. 101 because they are directed to non-statutory subject matter.
4. The language of claims 1, and 22 raises a question as to whether the claim is directed merely to an abstract idea, and would not result in a practical application producing a useful, concrete, and tangible result to form the basis of statutory subject matter under 35.U.S.C. 101. For example, receiving a request, scheduling the request, and coordinating, are an abstract idea that does not produce any tangible result.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The claim language in the following claims is not clearly understood:

i. As to claim 1, lines 3-5, it is not clearly understood how the request relates with "transmit data" (i.e. request to transmit data) and it is not clearly indicate how "data" relates to "scheduled resources" (i.e. data is a resource requested).

ii. As to claim 22, lines 3-4, it is not clearly understood how data management service being configured to perform network topology discovery, route creation, and path allocation and base on what standard; Lines 3-10, it is not clearly understood how the steps of "performing network topology discovery, route creation, and path allocation" relates with the steps of "schedule underconstrained request".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruttenberg et al. (U.S. 7,065,586 B2) in view of Kikinis (U.S. Patent 5,515,510).

7. As per claim 1, Ruttenberg teaches the invention as claimed including: a method of scheduling resources on a switched underlay network, the method comprising the steps of:

receiving a request for resources (receive a data transfer request and evaluate the data transfer request in view of satisfying objective in accordance with resources at each node, col. 1, line 65 – col. 2, line 3);

scheduling the request (col. 5, lines 3-6; col. 16, lines 3-5); and

coordinating with a data source to transmit data over the resources (transfer data base on satisfied, col. 3, lines 51-67; col. 5, lines 3-15; col. 16, line 9-30).

8. Ruttenberg does not explicitly teach the scheduled resource. However, Kikinis teaches the scheduled resource (abstract, lines 12-14; col. 48-49).

9. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of scheduled resource as taught by

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Kikinis to the invention of Ruttenberg because this would eliminate waiting by clients particularly in a real time performance for large number of clients and resources.

10. As to claim 2, Ruttenberg teaches the request has constraints (col. 3, lines 39-43), and wherein coordinating with the data source comprises ascertaining whether the data source is able to transmit data in conformance with the constraints (col. 3, lines 43-47; col. 4 – col. 5, line 2; col. 5, lines 36-45).

11. As to claim 3, Ruttenberg teaches the step of coordinating takes place before the step of scheduling (col. 4, line 41 – col. 5, line 4).

12. As to claim 4, Kikinis teaches the resources are lambdas (col. 7, line 65 – col. 6, line 11).

13. As to claims 5-6, 8 Ruttenberg teaches the request is an underconstrained request (col. 5, lines 16-34; col. 6, lines 46-67).

14. As to claim 7, Ruttenberg teaches some of the old requests are underconstrained requests (col. 6, lines 46-67); and

Kikinis teaches at least one of the old requests is a constrained request (col. 7, lines 37-42).

15. As to claims 9-10, Ruttenberg teaches inviting resubmission of the canceled old request (col. 5, lines 16-34).

16. As to claim 11, Ruttenberg teaches the request specifies the transfer priority, bandwidth requirements, transfer duration, desired transfer time window, and the time of submission (col. 3, lines 39-43; col. 6, lines 26-45).

17. As to claims 12-13, Ruttenberg teaches the step of scheduling the request is only performed if the method is able to schedule resources within constraints specified in the request (col. 4, line 41 – col. 5, line 4).

18. As to claims 14-15, Ruttenberg teaches the step of scheduling the request enables data transfers to occur on demand, rigidly in the future, loosely in the future, and in a manner constrained by external events (col. 5, lines 3-15).

19. As to claim 16, Ruttenberg teaches the step of interfacing with network resources to reserve bandwidth on the switched underlay network (col. 5, lines 36-48).

20. As to claim 17, Kikinis teaches of interfacing comprises querying the network for its topology and the relevant characteristics of links to be used to fulfill the request (col. 3, line 57 – col. 4, line 8).

21. As to claim 18, Kininis teaches the step of interfacing comprises planning a path through the switched underlay network from a data source to a data target, and reserving bandwidth along the path (col. 7, lines 1-31).

22. As to claim 19, Ruttenberg teaches the request is a request for scheduled resources to enable a large data transfer to take place on the switched underlay network (receive a data transfer request and evaluate the data transfer request in view of satisfying objective in accordance with resources at each node, (col. 1, line 65 – col. 2, line 3).

23. As to claim 20, Ruttenberg teaches the step of coordinating large data transfer between a data source and a data target (col. 1, lines 63-65).

24. As to claim 21, Ruttenberg teaches the step of coordinating the large data transfer comprises ascertaining the availability of the data source to transmit the data and the availability of the data target to receive the data (col. 1, line 63 – col. 2, line 7).

25. As to claim 22, a data transfer scheduling service configured to schedule network resources on a switched underlay network, comprising:

Kininis teaches a data management service, said data management service being configured to perform network topology discovery, route creation, and path allocation (col. 5, lines 62 – 67; col. 7, lines 9-22; col. 8, line 43 – col. 10, line 3); and

a network resource manager, said network resource manager being configured to interface network devices in the switched underlay network to schedule network resources on the switched underlay network (col. 6, lines 48-56);

Ruttenberg teaches wherein at least one of the data management service and the network resource manager is configured to schedule underconstrained requests for the network resources on the switched underlay network (col. 5, lines 3-6; col. 5, lines 16-34; col. 6, lines 46-67; col. 16, lines 3-5).

26. As to claim 23, Ruttenberg teaches at least one of the data management service and the network resource manager is configured to obtain information associated with the availability of a data source and optimize a schedule of scheduled underconstrained requests (col. 4, line 41 – col. 5, line 15).

Conclusion

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Camquy Truong whose telephone number is (571) 272-3773. The examiner can normally be reached on 8AM – 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3756.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

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applications may be obtained from either Private PAIR or Public PAIP. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIP system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

Camquy Truong

July 17, 2007


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